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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,549	09/23/2005	Michiharu Tanaka	Q85804	9126
65565	7590	08/29/2007		
SUGHRUE-265550			EXAMINER	
2100 PENNSYLVANIA AVE. NW			HORN, ROBERT WAYNE	
WASHINGTON, DC 20037-3213				
			ART UNIT	PAPER NUMBER
			2837	
			MAIL DATE	DELIVERY MODE
			08/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

7/7

Office Action Summary

Application No.

10/521,549

Applicant(s)

TANAKA ET AL.

Examiner

Robert W. Horn

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-44 is/are pending in the application.
- 4a) Of the above claim(s) 16-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The examiner acknowledges an amended response on 5/4/2007. With the response the applicant has not amended the claims but the applicant has sought to perfect foreign priority to JP2002-209490 and to point that the PCT Publication WO066210 to Kimura et al. was published in Japanese.

The examiner indicates that a response to an amendment is customarily filed with two months. However, the status of the case, in view of the amendment, was apparently not recorded properly, so the examiner was not aware that a reply response was due.

Response to Arguments

The applicant has argued that the Kimura et al. reference applied in the rejection dated 1/31/2007 is not prior art. The examiner respectfully agrees that the Kimura et al. reference is both predated by the applicant's priority document and the publication of a PCT in Japanese does not qualify as prior art to a U.S. application.

Applicant's arguments, see Remarks, filed 5/4/2007, with respect to the rejection(s) of claim(s) 14 and 15 under 35 USC § 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tino (U.S. Patent 5,280,622).

Claims Rejections - 35 USC § 103

The following are a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al. (U.S. Patent 4,648,783) and Tino (U.S. Patent 5,280,622).

Regarding claim 14, Tan et al. teaches a robot control apparatus equipped with a pendant (shown in figure 8) to be manipulated by a teacher (shown in figure 2), for controlling the operation of a robot 1 on the basis of an operation command from the pendant (as illustrated), comprising:

a detecting device (pad , figure 2, item 14) for detecting the position of the teacher;

a signal processing unit for receiving a signal from the detecting device to produce the position information of the teacher (robot controller, 12 or computer 20).

Tan et al. does not teach a speed limiting operation with respect to the detection of the positional information, but safety switches and a safety pad to assure the safety of the person working near the robot arm (abstract, background).

The safety mat detects the presence of the teacher, but the information is not used to control the maximum speed of the robot.

Tino teaches the limitations:

a limited speed selecting unit (figure 6) for selecting the operating speed of the robot on the basis of the position information (limited speed selected when position is less than three feet), wherein

the robot is controlled at the maximum operating speed selected by the limited speed selecting unit on the basis of the operation command (figure 6). Tino teaches the motivation of safety for the human workers stationed in the work space of the robot (column 1, lines 24-35), conditioned with the ability for the safety interlock to not go beyond the true requirement of safe operations to always be shutting down system (column 2, lines 40-55) when an object or operator is at a close, but still close position.

Tino does not teach a pendant or that the pendant selects the maximum operating speed, but rather a robot control and alarm circuit (figure 5, item 90; column 8, lines 13-15) that generates an instruction. It would be with the ordinary skill in robotic systems to use the pendant to program the maximum operating speed, since the pendant has a well-established function of receiving commands from a robot teacher.

Considering the objective evidence, it would have been obvious to someone of ordinary skill in the art of motor control in robotic systems to combine the limitations of

Tan et al. and Tino to operate a robot with a detecting device or system, a signal processing mechanism, a speed limiting control for limiting a speed of the robot based on the position of the robot operator, motivated to protect the safety of the operator, but reducing the maximum operating speed when the operator is in a close proximity to the robot, but the operation of the robot is not inhibited, taught by Tino. It would be obvious and within the ordinary skill to program a maximum speed by the use of the robot's pendant, since the pendant is customarily used for a variety of teaching functions for a robot.

Regarding claim 15, Tan et al. and Tino teach a robot control apparatus according to claim 14, and both Tan et al. and Tino teaches the limitations wherein the operation of the robot is stopped. Tan et al. teaches a dead man switch to disenable the robot entirely (abstract). Tino teaches the complete halting of the robot movement, the robot controlled by a series of instructions (column 8, lines 8-27). Tino does not describe the particulars of halting operation, but necessarily this would involve making the operation command to each the axes zero, or interrupting driving energy to the robot.

Conclusion

The examiner has applied new grounds to the rejection of the claims. The present action is therefore made non-final.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner points to the additional references cited in the form

Art Unit: 2837

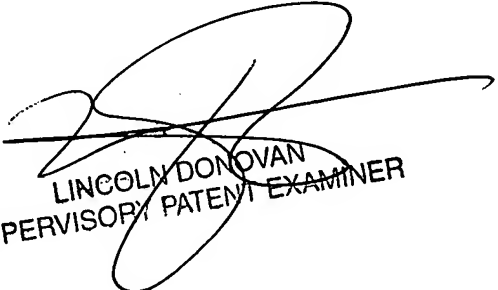
892. The examiner advises the applicant to review these references, because the examiner may apply the references in future actions, if necessitated by amendment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Horn whose telephone number is 571-272-8591. The examiner can normally be reached on Monday-Friday 7:00-3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln D. Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rwh
August 23, 2007


LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER